

Fig.1.

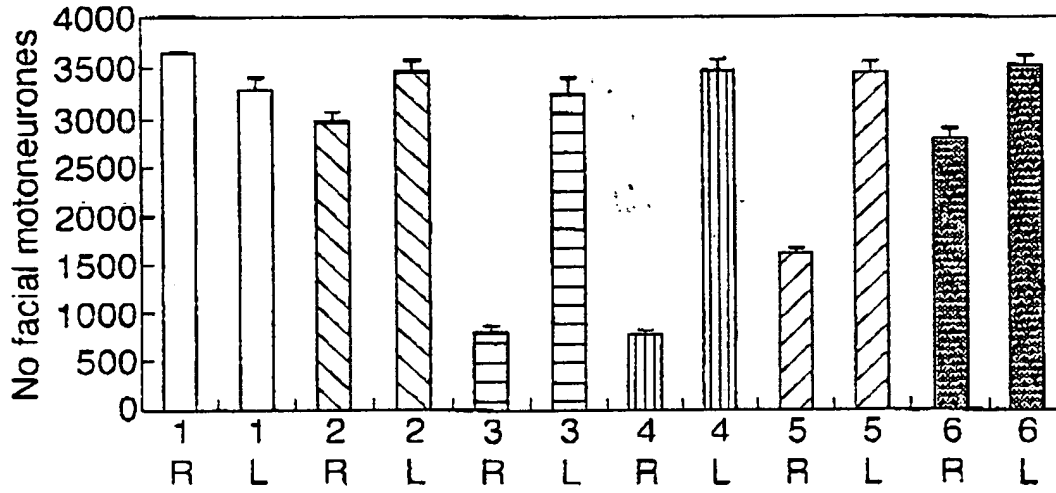
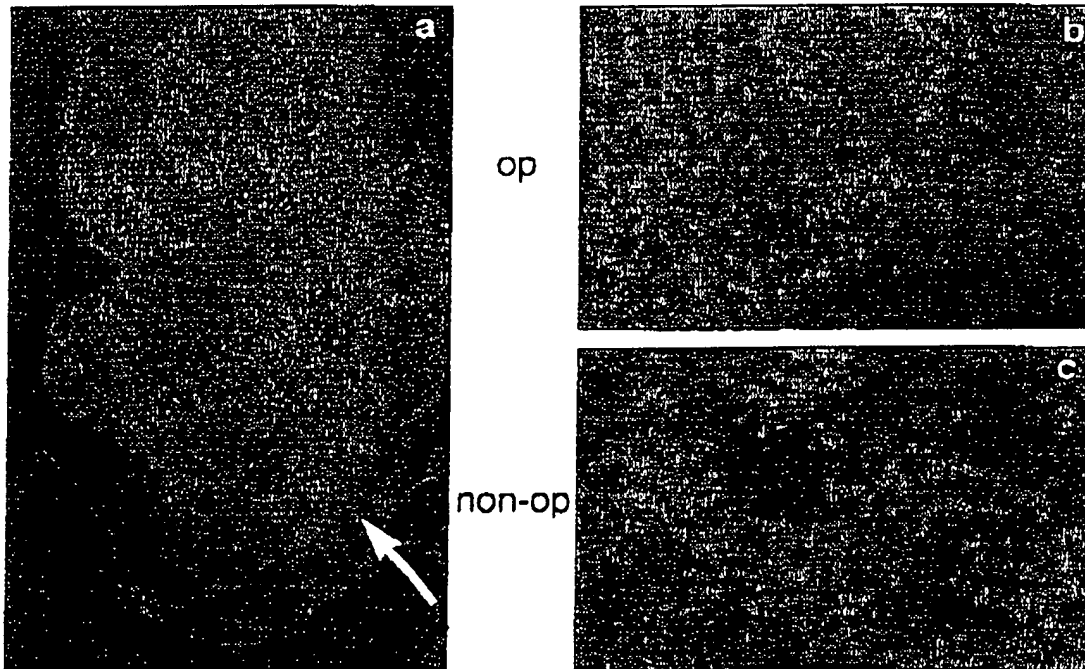


Fig.2.

Avulsion



**Fig.3.**  
**Plasmid**

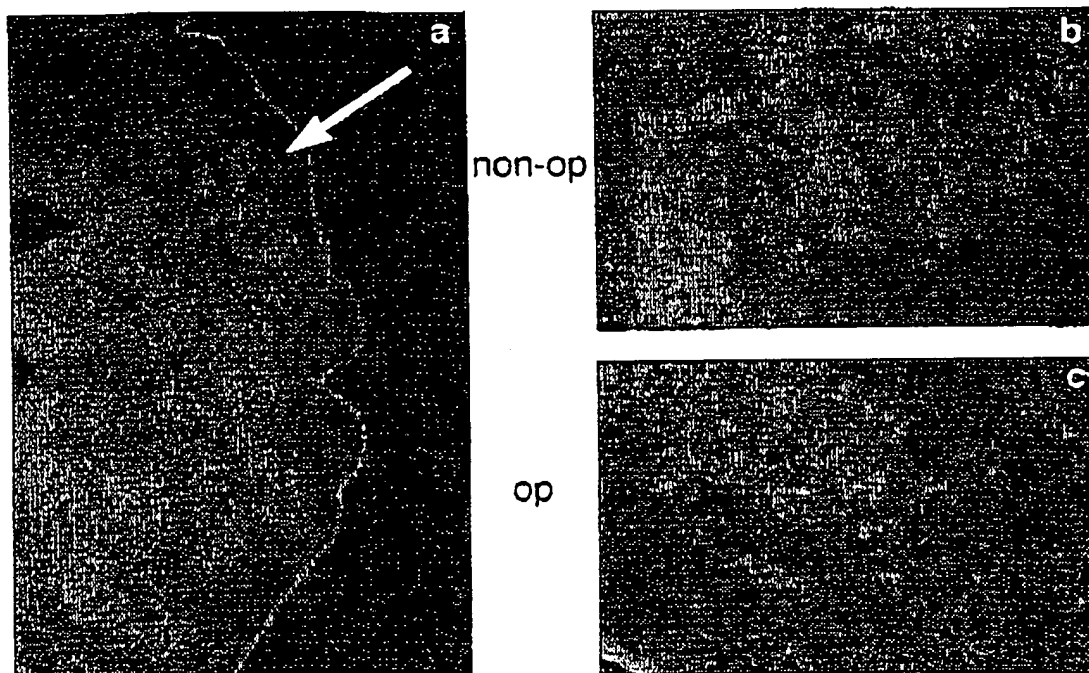


Fig.4.  
MGF Plasmid

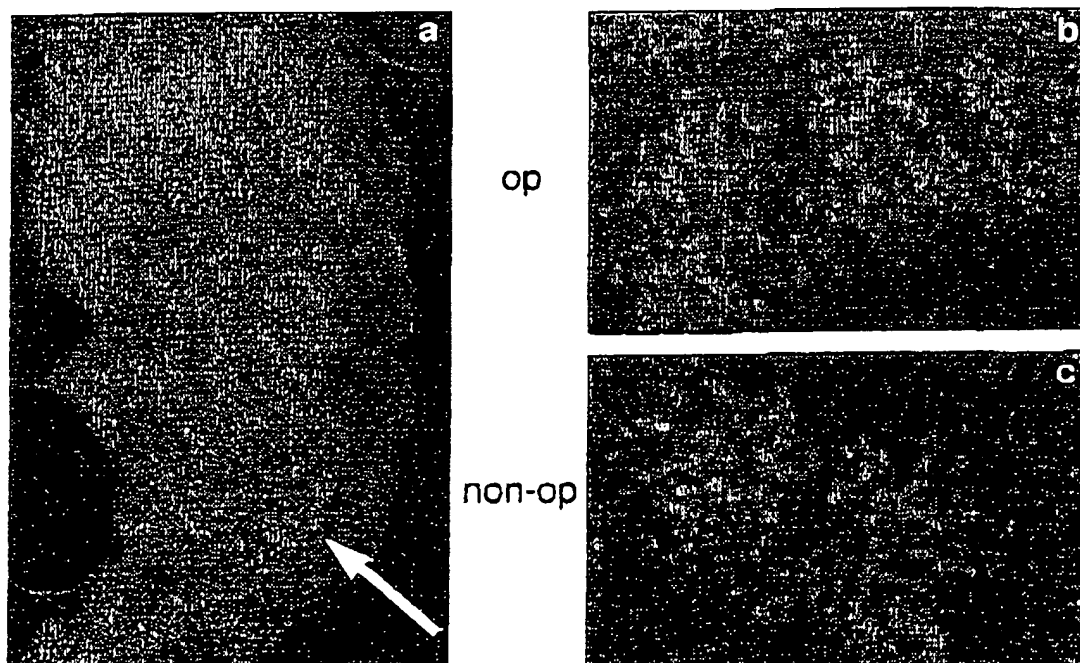


Fig.5.

cDNA sequence of Human MGF

Exon 1  
GGACCGGAGACGCTCTCGGGGGCTGAGCTGGTGGATGCTCTTCAGTTCTGTGTGGAGACAGGGGCTTTTATTTCACAAGCCCCACAGGGTATGGCTCCAGCAGTCCG

Exon 4  
AGGGCGCTCAGACAGGCTCTCTGGATGAGTCTCTCCGGAGCTGTGTATTAAGGAGGCTGGAGATGTATTGGCGACCCCTCAAGCCTGCCAAGTCAGCTCGCTC

Exon 5  
TGTCCGTGCCAGCGCCACACCGACATGCCCAAGACCCAGAAAGTATCAGCCCCCATCTACCAACAAGAACACGAAGTCTCAGAGAAAGGAAGTACATTTGAAG

Exon 6  
AACACAAGTAGAGGGAGTGCAGGNAACAAGAATACTACAGGATGTAGAAGACCTTCTGAGGAGTGAACAAGGACAGGCCACCCGAGGACCCCTTGTCTCTGCACAGTTA

CCTCTAAACATTGGAATACCGGCCCAAAATAAGTTTTCATCATTTTCAAGATGGCATTTTCCCCCAATGAATACACAAGTAAACAT

Protein sequence of Human MGF

Exon 3  
GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerAr

gArgAlaProGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysSerAlaArgS

erValArgAlaGlnArgHisThrAspMetProLysThrGlnLysTyrGlnProProSerThrAsnLysAsnThrLysSerGlnArgArgLysGlySerThrPheGlu

Exon 5  
Exon 6

GluHisLys

Fig.6.

cdna sequence of Rat MGF

Exon 3  
 GCACACAGAGACCCCTTTGCGGGGCTGAGCTGGTGGACGCTCTTCAGTTGCTGTGGACCAAGGGCTTTTACTTCAACAAGCCACACAGTCTATGGCTCCAGCATTCG  
 Exon 4  
 GAGGGCACACAGACGGGCATTGTGGATGAGTCTTTGCTTCCGGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGTCTCCGTGCAAGCCTACAAAGTCAGCTCGTT  
 Exon 5  
 CCATCCGGGCCCCAGCGCCACACTGACATGCCCAAGACTCAGAAGTCCAGGCCCTATTCGACACACAAGAAAGGAGCTGCAAGGAGGAAGGAAGTACACTT  
 Exon 6  
 GAAGAACAACAGTAGAGGAAGTGCAGGAACAACACACCTACAGATGTAGGAGGAGCCTCCCGAGGAACAGAAAATGCCACCTCACCGCAAGATCCTTTGCTGCTTGA  
 GCAACCTGCAAAACATCGAACACCTGCCAAATATCAATAATGAGTTCAATATCATTTTCAGAGATGGGCATTTCCCTCAATGAAATACACAAGTAACATTTCCCGGA

ATTC

Protein sequence of Rat MGF

Exon 3  
 GlyProGluThrLeuCysGlyAlaGluLeuValaspAlaLeuGlnpheValCysGlyProArgGlyPheTyrPheAsnLysProThrValTyrGlySerSerIleAr  
 Exon 4  
 gArgAlaProGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysValArgCysLysProThrLysSerAlaArgS  
 Exon 5  
 erIleArgAlaGlnArgHisThrAspMetProLysThrGlnLysSerGlnProLeuSerThrHisLysLysArgLysLeuGlnArgArgLysGlySerThrLeu  
 Exon 6  
 GluGluHisLys

Fig.7.

cDNA sequence of Rabbit MGF

Exon 3  
GGACCGGAGACGCTCTCCGGTGCTGAGCTGGTGGATGCTCTTCAGTTCTGTGTGGACACAGGGCTTTTATTTTCAACAAGCCACACAGGATACGGCTCCAGCAGTCCGAGGGCACC

Exon 4  
TCAGACAGGCATCGTGGATGAGTGTCTCGGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGCACCCCTCAAGCCGGCAAGGCAGCCCCGCTCCGTCCTGCTCCAGCGCC

Exon 5  
ACACCGACATGCCCAAGACTCAGAAGTATCAGCCTCCATCTACCAACAAGAAATGAGTCTCAGAGGAGAGGAAAGGAAGTACATTTTCAAGAACAACAAGTAGAGGAGTGCAGG

Exon 6  
AAACAAGAACTACAGGATGTAGGAAGACCTTCTGAGGAGTGAAGAAGACAGGCCACCGCAGGACCCCTTTTGCTCTGCACAGTTACCTGTAAACATTTGGAATPACCCGCCCAAAAAT

AAGTTTGATCACATTTCAAAGATGGCATTTTCCCCCAATGAATATACACAAGTAAACATTTC

Protein sequence of Rabbit MGF

Exon 3  
GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerArgAlaPr

Exon 4  
oGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysAlaAlaArgSerValArgAlaGlnArgH

Exon 5  
isThrAspMetProLysThrGlnLysTyrGlnProProSerThrAsnLysLysMetLysSerGlnArgArgLysGlySerThrPheGluGluHisLys

Exon 6

Fig.8.

cDNA sequence of Human L.IGF-1

Exon 3

GGACCCGAGACGCCTCTGCGGGCTGAGCTGGTGGATGCTCTTTCAGTTCGTGTGGAGACAGGGCTTTTATTTCACAGCCACAGGGTATGGCTCCACAGTCCGAGGGCGCC

Exon 4

TCACACAGGCATCGTGGATGAGTGTCTTCGGAGCTGTGATCTAAGGAGGCTGGAGATGATTGGCACCCTCAAGCTGCCAAGTCAGCTCGCTCTGTCCAGCGCC

Exon 6

ACACCGACATGCCCAAGACCCAGAGGAGTACATTGAAGAACGCAAGTAGGGAGTCAGGAAACAGAACTACAGGATGTAG

Protein sequence of Human L.IGF-1

Exon 3

GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerArgArgAlaPr

Exon 4

oGlnTheGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysSerAlaArgSerValArgAlaGlnArgH

Exon 6

isThrAspMetProLysThrGlnLysGluValHisLeuLysAsnAlaSerArgGlySerAlaGlyAsnLysAsnTyrArgMet

Fig.9.

cdna sequence of Rat L.IGF-1

Exon 3

GGACCAGAGACCCCTTTCGGGGCTGAGCTGGTGACGCTCTTCACATTCGTGTGTGGACCAAGGGCTTTTACCTTCAACAAGCCCCACAGTCTATGGCTCCAGCATTCGGAGGGCACC

Exon 4

ACAGACGGGCATTCTGGATGAGTGTTCCTTCCGAGCTGTGATCTGAGGAGGCTGGAGATCTACTGTGTPCCGCTGCAAGCCTACAAAGTCAGCTCGTTCCATCCCGGGCCCCAGCGCC

Exon 6

ACACTGACATGCCCAAGACTCAGAAGGAAGTACACTTGAAGAACAACAAGTAGAGGAAGTGCAGGAAACAAGACCTACAGAATGTAGGAGGAGCTCCCGAGGAACAGAAAATGCCA

CGTCACCGCAAGATCCTTTGCTGCTTGAGCAACCTGCAAAACATCGGAACACCTGCCAAATATCAATAATGAGTTCAATATCATTTTCAGAGATGGGCATTTCCCTCAATGAATATAC

ACAAGTAAACATTCGCCGAATTC

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Prot in sequence of Rat L.IGF-1

Exon 3

GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyProArgGlyPheTyrPheAsnLysProThrValTyrGlySerSerIleArgAlaPr

Exon 4

oGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysValArgCysLysProThrLysSerAlaArgSerIleArgAlaGlnArgH

Exon 6

isThrAspMetProLysThrGlnLysGluValHisIeuLysAsnThrSerArgGlySerAlaGlyAsnLysTyrTyrArgMet

Fig.10.

cDNA sequence of Rabbit L.IGF-1

Exon 3

GGACCGGAGACGCTCTGCGGTGCTGAGCTGCTTCAAGTTCGTCTGTGGACACAGGGGCTTTTATTTCACAACAGCCACAGGATACGGCTCCAGCAGTCCGAGGGCACC

Exon 4

TCGACAGGCATCGTGGATGAGTGCCTTCGGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGCACCCCTCAAGCCGGCAAGGAGAGCCCGCTCCGTCCGTGCCAGCGCC

Exon 6

ACACCGACATGCCCAAGACTCAGAAGGAAGTACATTGTGAAGAACACAAAGTAGAGGAGTCCAGGAACAAGAACTACAGGATGTAGGAAGACCCCTTCTGAGGAGTGAAGAAGGACA

GGCCACCCGAGACCCCTTTGCTCTGCACAGTTACCTGTAAACATTGGAATACCGGCCCAAAANATAGTTTTCATCACATTTCAAGATGGCATTTTCCCCCAATGAATAACACAAGTA

AACATTTC

Protein sequence of Rabbit L.IGF-1

Exon 3

GlyProGlnThrLeuCysGlyAlaGlnLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerArgArgAlaPr

Exon 4

pGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgLeuGluMetTyrCysAlaProLeuLysProAlaLysAlaAlaArgSerValArgAlaGlnArgH

Exon 6

isThrAspMetProLysThrGlnLysGluValHisLeuLysAsnThrSerArgGlySerAlaGlyAsnLysAsnTyrArgMet



Fig. 11.

Exon 4																																	
Hu MGF -	A	sn	Lys	Pro	Thr	Gly	Tyr	Gly	Ser	Ser	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe									
Rat MGF -	A	sn	Lys	Pro	Thr	Val	Tyr	Gly	Ser	Ser	Ile	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe								
Rab MGF -	A	sn	Lys	Pro	Thr	Gly	Tyr	Gly	Ser	Ser	Ser	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe								
Hu IGF -	A	sn	Lys	Pro	Thr	Gly	Tyr	Gly	Ser	Ser	Ser	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe								
Rat IGF -	A	sn	Lys	Pro	Thr	Val	Tyr	Gly	Ser	Ser	Ile	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe								
Rab IGF -	A	sn	Lys	Pro	Thr	Gly	Tyr	Gly	Ser	Ser	Ser	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe								
Hu MGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Ala	Pro	Leu	Lys	Pro	Ala	Lys	Ser	Ala	Arg	Ser	Val									
Rat MGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Val	Arg	Cys	Lys	Pro	Thr	Lys	Ser	Ala	Arg	Ser	Ile									
Rab MGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Ala	Pro	Leu	Lys	Pro	Ala	Lys	Ala	Ala	Arg	Ser	Val									
Hu IGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Ala	Pro	Leu	Lys	Pro	Ala	Lys	Ser	Ala	Arg	Ser	Val									
Rat IGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Val	Arg	Cys	Lys	Pro	Thr	Lys	Ser	Ala	Arg	Ser	Ile									
Rab IGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Ala	Pro	Leu	Lys	Pro	Ala	Lys	Ala	Ala	Arg	Ser	Val									
Exon 5																																	
Hu MGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys	Tyr	Gln	Pro	Pro	Ser	Thr	Asn	Lys	Asn	Thr	Lys									
Rat MGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys	Ser	Gln	Pro	Leu	Ser	Thr	His	Lys	Lys	Arg	Lys									
Rab MGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys	Tyr	Gln	Pro	Pro	Ser	Thr	Asn	Lys	Lys	Met	Lys									
Hu IGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----									
Rat IGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----									
Rab IGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----									
Exon 6																																	
Hu MGF -	Ser	Gln	Arg	Arg	Lys	G	ly	Ser	Thr	Phe	Glu	Glu	His	Lys																			
Rat MGF -	Leu	Gln	Arg	Arg	Lys	G	ly	Ser	Thr	Leu	Glu	Glu	His	Lys																			
Rab MGF -	Ser	Gln	Arg	Arg	Lys	G	ly	Ser	Thr	Phe	Glu	Glu	His	Lys																			
Hu IGF -	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	Glu	Val	His	Leu	Lys	Asn	Ala	Ser	Arg	Gly	Ser	Ala	Gly	Asn	Lys	Asn	Tyr	Arg	Met
Rat IGF -	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	Glu	Val	His	Leu	Lys	Asn	Thr	Ser	Arg	Gly	Ser	Ala	Gly	Asn	Lys	Thr	Tyr	Arg	Met
Rab IGF -	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	Glu	Val	His	Leu	Lys	Asn	Thr	Ser	Arg	Gly	Ser	Ala	Gly	Asn	Lys	Asn	Tyr	Arg	Met

[illegible]